



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/586,858

06/05/2000

Avery Osgood

0111453.00125US1

8377

68175

7590

03/19/2007

WILMER, HALE, PERKIN & ELMER, LLP

60 STATE STREET

BOSTON, MA 02109

EXAMINER

SIEFKE, SAMUEL P

ART UNIT

PAPER NUMBER

1743

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

2 MONTHS

03/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED
MAR 19 2007
GROUP 1700

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/586,858
Filing Date: June 05, 2000
Appellant(s): OSGOOD ET AL.

Michael A. Diener
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/22/07 appealing from the Office action mailed 3/17/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

For the above reasons, it is believed that the rejections should be sustained.

WO 99/36760	Overbeck	7-1999
6,428,752	Montagu	2-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims **1-4,6-18, 102-133** are rejected under 35 U.S.C. 102(a) as being anticipated by WO 99 36760 A (Genetic Microsystems, Inc.).

'760 discloses an apparatus for washing and drying a pin of a microarray spotting instrument that comprises: moving a pin to a given position; washing the pin while in a given position by impinging fluid against the pin; and drying the pin without substantially moving the pin from the given position (page 10, lines 5-25); moving the pin comprises positioning a pin in a given location (chamber or tube, fig 9F and 9G) in a pin washer/dryer apparatus; washing the pin comprises directing multiple streams of wash fluid at the pin; drying the pin comprises flowing air past the pin (vacuum; page 44; lines 1-18); (page 10, line 5- page 11, line 25; page 43, line 25 - page 44, line 18; page 47, lines 7-18).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims **1-4,6-18, 102-133** are rejected under 35 U.S.C. 102(e) as being anticipated by Montagu (USPN 6,428,752).

Montagu discloses an apparatus for washing and drying a pin of a microarray spotting instrument that comprises: moving a pin to a given position; washing the pin while in a given position; and drying the pin without substantially moving the pin from the given position; moving the pin comprises positioning a pin in a given location (chamber or tube, fig 9F and 9G) in a pin washer/dryer apparatus; washing the pin comprises directing multiple streams of wash fluid at the pin; drying the pin comprises flowing air past the pin (vacuum; col. 10, lines 18-20); (col. 2, lines 25-50; col.4, line 27 - col. 5, line 46; col. 10, lines 6-34; col. 15, lines 8-61; claims 1-14). Examiner would like to specifically point to column 4, lines 32-44 and even more to lines 37-42, "preferably a cleaning or drying station comprising a circular nozzle is constructed to discharge a conical flow of fluid... high pressured liquid... against (impinging) a deposit device (being a pin or pin -like structure." Webster's 11 New Riverside University Dictionary defines impinge as; (1) to push against, (2) to collide or strike. Reference '752 does just this. It is inherent that '752 impinges a cleaning fluid on the tip (12d) of the pin because in the pin itself is the depositing device (col. 9, lines 16-50). The Examiner points out that the mere act of multiple streams impinging on the pin would create the "swirling" pattern recited. Examiner points to col. 10, lines 22-34 as cited before in the First Office Action. The pin and ring are first exposed to one or more simultaneous or successive fluid currents or blasts of continuous or pulsed flow that blow remaining sample fluid from the parts and into the trap. Subsequently a fluid stream of liquid or air may expose the parts to cleaning fluid such as liquid stream or aerosols containing water-borne detergents. Column 10, lines 32-34 teach that an air

current from the nozzle, supplemented by induced air flow 204, can dry both pin and ring, in which case the air streams may be heated. The air being introduced into the chamber for drying is inherently dryer than the air around the tip of the dispensing nozzle because when heated the water on the nozzle is evaporated into the surrounding air making the air around the nozzle have more humidity than the incoming air. The purpose of the vacuum pump is to create a vacuum so that when a pin is washed the vacuum removes the wash fluid previously applied to the pin (claim 1). Drying the pin is accomplished by an air current from the nozzle, supplemented by induced air flow 2% (col. 10, lines 1 1-34).

(10) Response to Argument

A) Appellant argues, "Claim 1 of the present application is not anticipated by either the '760 or Montagu references because neither reference discloses (or even suggests) "washing said pin... by impinging a fluid depositing tip of said pin with at least one stream of wash fluid." The prior art of '760 and Montagu clearly show, as seen in figure 7 supplied in the Appeal brief, impinging a fluid depositing tip (12d) with at least one stream of wash fluid (indicated by two arrows extending from reference 200 which is the wash fluid exit nozzle which surrounds the entire pin device, see cut away in figure 8). In the two references a nozzle 200 (in figure 7) blasts a cleaning fluid toward the fluid depositing tip whereby the fluid "impinges" and therefore cleans the tip of the depositing device. A downward air flow additionally aids in directing the wash fluid while

in route to the tip 12d thereby impinging the fluid from nozzle 200 (**two illustrated diagonal arrows pointed toward the tip 12d**). The Examiner points to figure 2b where the ring and pin device is shown from above. Support rod 15 extends to the ring 14 which surrounds the pin tip 12d. The ring is there for providing the tip 15d a sample when the pin is push through the sample as seen in figures 3a-3d. Since the ring 14 is provided around the pin tip, the inventors needed a way to clean the pin tip. Their solution was to provide a circular nozzle 200 that surrounds the entire pin and ring, which directs wash fluid to the pin tip with a downward air flow. This allows for the wash fluid to enter the assembly as seen in Figure 7 at an angle that will impinge the pin tip when in the presence of an air flow. **Simply extrapolate the left arrow from nozzle 200 in figure 7 and it hits the pin tip.** Add an air flow and the wash fluid after impinging the tip is carried away. Further, since nozzle 200 is circular, it surrounds the entire depositing pin 12 as seen in Figure 8, 8a, 10 and 10a (top and side views of figures 8 and 8a), it blasts wash fluid at 360 degrees around the pin with exception of the rod 15 where the fluid would strike. The Examiner has cited the definition of impinge in previous Office Actions and brings up the definition again. Webster's 11 New Riverside University Dictionary defines impinge as; (1) to push against, (2) to collide or strike. Both prior art '760 and Montegu disclose the limitation of impinging a fluid depositing device tip of said pin with at least one stream of wash fluid.

The Appellant argues, "Montague and the '760 reference actually teach away from impinging the pin tip was fluid. It appears that this is not even possible in the wash station disclosed in the reference because the presence of the supply ring as shown in

Fig. 7. would prevent any impingement of the pin tip with fluid from the annular nozzle... Fluid cannot simply bypass the ring and directly impinge the pin tip." Since the ring 14 is provided around the pin tip, the inventors needed a way to clean the pin tip. Their solution was to provide a circular nozzle 200 that surrounds the entire pin and ring, which directs wash fluid to the pin tip with a downward air flow. This allows for the wash fluid to enter the assembly as seen in Figure 7 at an angle that will impinge the pin tip when in the presence of an air flow. **Simply extrapolate the left arrow from nozzle 200 in figure 7 and it hits the pin tip.** Add an air flow and the wash fluid after impinging the tip is carried away. Further, since nozzle 200 is circular, it surrounds the entire depositing pin 12 as seen in Figure 8, 8a, 10 and 10a (top and side views of figures 8 and 8a), it blasts wash fluid at 360 degrees around the pin with exception of the rod 15 where the fluid would strike. Further claim 1 does not state "directly" impinging, it just states that a wash fluid impinges a pin tip.

B) Independent claim 102, Appellant argues, "There is no teaching or suggestion that the air used for drying be of a lower humidity and be introduced into an enclosure containing the spotting instrument." Column 10, lines 32-34 teach that an air current from the nozzle, supplemented by induced air flow 204, can dry both pin and ring, in which case the air streams may be heated. The air being introduced into the chamber for drying is inherently dryer than the air around the tip of the dispensing nozzle because when heated the water on the nozzle is evaporated into the surrounding air making the air around the nozzle have more humidity than the incoming air. The prior art also states the air employed for drying the pins is from a compressed air source, i.e.

Art Unit: 1743

a nitrogen tank. It is inherent that nitrogen from a compressed nitrogen tank is of lower humidity than the air in the enclosure (col. 14, line 62- col. 15, line 5). Further since a nitrogen tank is employed it is inherently contained outside the cleaning and drying station because the tank would have to be remotely placed because of its typical size. A heater within the air flow path heats the air for drying the pins (col. 15, lines 4-5).

C) Claims 118-133. The Appellant argues, neither reference discloses drying the pins while applying a vacuum to draw air past the pins. The prior art as previously stated, comprises a flow nozzle arranged adjacent to the portal to produce a cleaning or drying flow directed generally inwardly of the chamber along said device such that the flow is induced by a jet from said work zone which creates at least a partial suction into the chamber (claim 1). The addition of a drying air to the chamber creates a partial suction (vacuum) in the chamber that aids in drying the pins and pulling liquid away from the pins to the liquid collection area. Therefore the prior art teaches this limitation.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the Examiner in the Related Appeals and Interferences section of this Examiner's Answer.

Art Unit: 1743

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

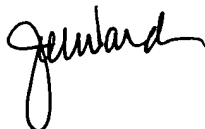
Sam P. Siefke



January 31, 2007

Conferees:

Jill Warden



Roy King

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

